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**Report No.** 11984

PROJECT COMPLETION REPORT

NEPAL

SECOND EDUCATION PROJECT
(Technical and Vocational Training)

(CREDIT 1198-NEP)

JUNE 14, 1993

Population and Human Resources Division
Country Department I
South Asia Regional Office

## CURRENCY EQUIVALENTS

December 1981

| | | |
|---|---|---|
| Nepalese Rupees (NRs) | = | US$ 7.58 |
| US$1.00 | = | NRs 13.2 |

September, 1991

| | | |
|---|---|---|
| US$1.00 | = | NRs 42.7 |
| NRs 100 | = | US$ 2.34 |

## FISCAL YEAR

July 16 - July 15

## ABBREVIATIONS

| | | |
|---|---|---|
| CTA | - | Chief Technical Adviser |
| CTEVT | - | Council for Technical Education and Vocational Training |
| DCA | - | Development Credit Agreement |
| HMG(N) | - | His Majesty's Government of Nepal |
| IDA | - | International Development Association |
| ILO | - | International Labor Organization |
| IOE | - | Institute of Engineering, Tribhuvan University |
| NSTA | - | National Skill Testing Authority |
| NSTB | - | National Skill Testing Board |
| PCR | - | Project Completion Report |
| PIU | - | Project Implementation Unit |
| PSC | - | Public Service Commission |
| SDR | - | Special Drawing Rights |
| STD | - | Skill Testing Division |
| TA | - | Technical Assistance |
| UNDP | - | United Nations Development Programme |
| UNESCO | - | United Nations Educational, Scientific and Cultural Organization |
| WRC | - | Western Regional Campus of IOE, Pokhara |

THE WORLD BANK
Washington, D.C. 20433
U.S.A.

Office of Director-General
Operations Evaluation

June 14, 1993

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

SUBJECT: Project Completion Report on Nepal
Second Education Project
(Technical and Vocational Training) (Cr. 1198-NEP)

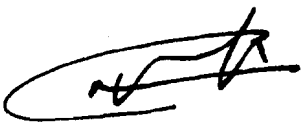
Attached is the Project Completion Report on Nepal - Second Education Project (Technical and Vocational Training) (Credit 1198-NEP) prepared by the South Asia Regional Office with Part II contributed by the Borrower. The report gives an adequate assessment of project achievements.

This project outcome is rated as satisfactory: it met in large part the objectives of increasing training capacities for craftsmen and engineering technicians and improving training standards.

Institution building under the project has been substantial. However, the sustainability of the achievements remains uncertain as the effective demand for the training offered appears unsteady. The Government is looking at possibilities of making better use of facilities and staff.

This project may be audited along with three subsequent operations in the sector which are nearing completion.

Attachment



NEPAL
SECOND EDUCATION PROJECT (Technical and Vocational Training)
(Cr. 1198-NEP)

PROJECT COMPLETION REPORT

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NEPAL

SECOND EDUCATION PROJECT (Technical and Vocational Training)

(Cr. 1198-NEP)

# PROJECT COMPLETION REPORT

## PREFACE

This is the Project Completion Report (PCR) for the Second Education Project in Nepal (Technical and Vocational Training) for which Cr. 1198-NEP in the amount of SDR 12.5 million (US$ 14.3 million equivalent) was approved on December 22, 1981. The Credit was 79.5% disbursed, and the last disbursement was on June 11, 1992. The remaining balance of SDR 2.57 million (US$ 2.93 million equivalent) was cancelled on September 23, 1992. The Project was cofinanced with the United Nations Development Programme (UNDP) which provided US$ 3.23 million for technical assistance.

The PCR was jointly prepared by the Population and Human Resources Division of the South Asia Country Department 1 (Preface, Evaluation Summary, Parts I and III) and the Borrower (Part II, and selected information included in Part III).

Preparation of this PCR was initiated during IDA's final supervision of the project during November 1991, and is based, inter alia, on the Staff Appraisal Report, the Development Credit Agreement (DCA), supervision reports, correspondence between IDA and the Borrower, interviews with officials of the Tribhuvan University and Institute of Engineering, the Terminal Report of UNDP technical assistance, and internal IDA memoranda.

NEPAL

SECOND EDUCATION PROJECT (Technical and Vocational Training)

(Cr. 1198-NEP)

PROJECT COMPLETION REPORT

EVALUATION SUMMARY

(i) Project objectives (para 2) The Project objectives were (i) to increase the supply of skilled craftsmen with basic engineering skills and of civil, electrical and mechanical engineering technicians needed to implement Nepal's development programs; (ii) to improve the relevance and quality of all trade skills training throughout the country through the establishment of national skill standards, to be incorporated into public service standards for appointment and promotion; and (iii) to enhance the career prospects for skilled craftsmen and technicians in the public service through the introduction of appropriate career structures. Finally, the project would contribute to the further development of the education sector through improved planning and project preparation and evaluation studies.

(ii) Implementation Experience (section E) Implementation was subject to serious delays, due to (a) late finalization of buildings design; (b) poor performance of the main building contractor, and consequent delays in equipment procurement; (c) delayed establishment of the National Skill Testing Authority; (d) failure to implement a plan to improve the appointment and career development opportunities of skilled craftsmen and technicians in the public service, and (e) initial delays in assembling a team of technical assistance consultants.

(iii) Results (section F) By the revised closing date, the project had achieved or was about to achieve its main objectives. The Center at Pokhara was built, equipped and staffed. Three hundred and twenty three technicians and 245 one-year craft trainees had received training, which corresponds to appraisal estimates. The project has provided training opportunities in hitherto neglected parts of the Country. About 25 of the first batch of craft trainees have set up their own small businesses, demonstrating the project's potential for stimulating local opportunities of employment creation. Trade testing and certification systems developed under the project are now implemented under the Council for Technical Education and Vocational Training (CTEVT) which was established in 1988. Trade advisory committees have been established, fifty-two trade standards have been developed, and annual trade tests have been conducted since 1985. A government task-force reported in 1989 on Career Progress Opportunities for Technicians and Tradesmen. It is expected that its recommendations for enhancing these opportunities will be reflected in changed regulations to be proposed by the National Education Commission.

(iv) Sustainability (section G) Under the auspices of the successor Engineering Education Project (Cr.2044-NEP), a Workshop on Sustainability of Projects in the Institute of Engineering took place in Kathmandu in May 1992. In consequence, a task-force was established comprising senior staff of the Institute, and representatives of the public and private sectors. The task-force will identify issues and make recommendations for enhancing sustainability of the Institute's development program. At the Pokhara campus, contracts for local training services are helping to provide continuing staff incentives and to improve facilities. Further opportunities are being explored for staff of the Center to provide training and consultant services. Long-term sustainability will depend on continuing local commitment to the concept and objectives of the project, which in turn will depend on its perceived contribution to meeting skilled manpower needs and creating job opportunities. Changes in career progression regulations in the public service will stimulate demand for training opportunities available through the project.

(v) Lessons learned Some of the lessons learned are: (a) sustainable training programs, especially in areas offering limited jobs, require linkage to established industry, student counselling programs, and assistance in creating small enterprises and self-employment opportunities: this was insufficiently recognized in the project design; (b) where major policy issues such as employment conditions in the public service are beyond the control of a project, but central to its concept, suitable implementation arrangements need to be made: the Project Implementation Unit was internal to the Institute of Engineering, and no mechanisms were created to improve career prospects for technicians and skilled craftsmen in government service; (c) serious problems and delays in construction and equipment can divert attention from wider issues of policy implementation under other components: the supervision reports reflect this emphasis; (d) early identification and regular review of key project performance indicators can ensure balanced supervision, and help to highlight areas requiring particular attention: key indicators were developed during the third year of project implementation, but were not regularly applied thereafter.

# NEPAL

## SECOND EDUCATION PROJECT (Technical and Vocational Training)

## (Cr. 1198-NEP)

## PROJECT COMPLETION REPORT

## PART I: PROJECT REVIEW FROM BANK PERSPECTIVE

### A. Project Identity

- Project Name: Second Education Project (Technical and Vocational Training)
- Credit No. : 1198-NEP
- RVP Unit : South Asia Regional Office Country Department I
- Country : Nepal
- Sector : Population and Human Resources
- Subsector : Technical and Vocational Training

### B. Project Background

1. By almost any standard, Nepal is one of the least developed countries in the world. Per capita income is estimated at $180, health and education standards are well below the average for South Asia, and population growth is in excess of two percent per year. Before 1971, little emphasis had been placed on vocational training or technical education at either secondary or post-secondary level. In 1971, the Government adopted a New Education System Plan designed to enlarge access to basic education, improve teacher training and reorient education away from academic and theoretical subjects toward practical activities more closely related to the needs of development. Institutes within Tribhuvan University (the only university in Nepal) were made responsible for post-secondary technical education, the Institute of Engineering (IOE) being responsible for electrical, construction and mechanical trades and technician training. During the Fifth Development Plan (1975-80) education enrollments exceeded targets, but the vocational and technical training system still failed to supply adequate numbers of skilled workers and technicians required for economic growth, and industrial production fell behind expectations due both to lack of viable investment opportunities and scarcity of skilled manpower, particularly technical and supervisory manpower. At the same time, high population growth combined with low rates of economic growth, so

that the creation of employment opportunities lagged behind growth in the labor force, resulting in unemployment and underemployment. The Sixth Plan (1981-86) therefore attached considerable importance to development of the education sector both as part of its strategy to meet the minimum basic needs of the population, and to support economic development in other sectors, which was retarded by inadequate numbers of suitably skilled technical personnel. High priority was given to expansion of the present inadequate capacity for technical and vocational skills training.

C. Project objectives and description

2. Project objectives. The Project objectives were (a) to increase the supply of skilled craftsmen with basic engineering skills and of civil, electrical and mechanical engineering technicians needed to implement Nepal's development programs; (b) to improve the relevance and quality of all trade skills training throughout the country through the establishment of national skill standards, to be incorporated into public service standards for appointment and promotion; and (c) to enhance the career prospects for skilled craftsmen and technicians in the public service through the introduction of appropriate career structures. Finally, the Project would contribute to the further development of the education sector through improved planning and project preparation and evaluation studies.

3. Project components. The main components of the Project were:

(a) Western Region Center: Construction, furnishing and equipping of a skill training center at Pokhara in the Western Region to provide 160 trained craftsmen and 96 technicians in civil, mechanical and electrical technology per annum. In addition provision was made for academic and communal facilities including staff housing (100%) and student boarding (90%). Operating costs for incremental staff salaries, consumable training materials and maintenance were also provided.

(b) National Skill Testing Authority and the Public Service Promotional Structure: The establishment of a National Skill Testing Authority of the Government having a permanent technical skill testing Secretariat. The Authority would be authorized, if necessary under laws promulgated for the purpose, to set standards for engineering trades and to design and administer nationally recognized trade skill tests. The promotional structure of the Public Service would be revised by the Public Service Commission, if necessary under a new legal mandate, to provide skilled tradesmen and technicians with adequate promotion prospects to suitably senior levels.

(c) Education Project Studies to be carried out by the Ministry of Education for future education projects, including: (i) the full preparation of a primary education project; (ii) a study on the need for improvements in secondary education; (iii) a needs assessment study to expand non-formal education. All these preparatory studies would examine the potential of new management approaches to education under environmental conditions peculiar to Nepal. Additional evaluation of the First Education Project would also be made possible after its completion, through a monitoring system to be established by the Institute of Engineering (IOE) of Tribhuvan University; the monitoring system would provide a data base for the preparation of completion reports for both the First and Second Education Projects.

(d) Project Implementation Services and Technical Assistance including: (i) technical assistance consisting of about 62 student-years of overseas fellowships and about nine consultant/ adviser years of specialist services partly financed by UNDP, and additional consultant and specialist services, mainly for the project studies; (ii) establishment of an office for the Project Implementation Unit which would include office furniture and equipment and incremental operating costs, including salaries and travel.

D. Project design and organization

4. The Project was initially identified under a study included in the First Education Project (Cr. 772-NEP), and further defined in a Project Brief following an IDA mission in November 1979. The project request was prepared by the Government in March 1980, and appraised by an IDA mission in November 1980. It reflected plan objectives to provide enhanced technical training opportunities.

5. While the Project components were well prepared, full recognition of the possible effects of locating the Center at Pokhara were not taken into account, nor the need to integrate operations with the development of potential employers. The new training center was located in an area of limited industrial activity. There are few opportunities for acquiring industrial skills within enterprises, and severely limited local employment opportunities for graduates of institutional training programs. Furthermore, opportunities for public sector employment became increasingly scarce as a result of government policy to restrain the growth of the public sector. The need to create employment opportunities in large or small enterprises in the private sector is more clearly recognized now than at the time of appraisal. This would require improved linkages with industry, strengthened employee counselling and placement services, and provision of credit, technical support services, and training in simple management techniques to encourage and assist the development of small enterprises, and of self-employment opportunities.

6. In preparing the Project, HMG undertook to establish a National Skill Testing Authority (NSTA), and to incorporate skill tests in the appointment and promotion procedures of the public service. It was foreseen at appraisal that these obligations might require legislation affecting the Public Service Commission (PSC). The major policy issue of employment standards in government service was beyond the control of the Project,but central to its concept, and likely consequential delays in achieving project aims were rightly identified as a risk. Project assistance for fellowships, office furniture and equipment was foreseen for the PSC and NSTA, and for consultant services and incremental operating costs at the NSTA. However the project's implementation arrangements were mainly internal to the Institute of Engineering (IOE), and no mechanisms were created to assist implementation of this component.

E. Project Implementation

7. The Project became effective July 23 1982. It was expected to be completed by December 31 1987, but was subject to delays in implementation. Four extensions of the completion date were agreed, with successive revised closing dates of June 30 1989, June 30 1990, and June 30 and finally December 31, 1991. The Project Implementation Unit was established by May 1983, after 18 months' delay, except for the project architect who was appointed in August, 1983. The delays in appointment of PIU staff were attributed to slow internal clearance procedures.

8. The Training Center at Pokhara. The Government chose a group of architectural consultants which had performed satisfactorily in design work for the First Education Project (Cr. 772-NEP). However, there were delays in finalizing architectural designs, and implementation was further delayed by the poor performance of the main building contractor. The new campus was finally available for teaching programs in 1987, three years after the original target date for completion of the construction. Despite difficulties and delays during implementation, construction is now complete, and essential repairs to the buildings and electric power supply have been completed. Nevertheless, many of the physical facilities, especially the library and residential accommodation for students, are not operating at a standard appropriate for an institute of higher education. This may in part be attributable to the poor treatment of the facilities by the students. However inadequacies of design, construction, equipment and maintenance have undoubtedly contributed to a disappointing atmosphere on a potentially scenic and attractive campus site. The workshops built and equipped under the project are all operational. Landscaping required to resist erosion will be undertaken as part of the new construction under the Engineering Education Project (Cr. 2044-NEP). Technical assistance, staff training and curriculum development were successfully completed by 1989. However, curricular materials and

training manuals were not readily available for inspection in the workshops, during a period of vacation. Those subsequently inspected were comprehensive in their coverage, and of an adequate technical standard.

9. Because of the poor performance of the contractor, the Borrower withheld liquidated damages and other payments to compensate for the delays, and for the poor quality of the construction, which required repairs and early maintenance work. The dispute with the contractor was finally settled in April 1992. Delays in the completion of the buildings caused delays with the procurement of equipment. The final orders were placed in late 1990, but were not delivered on schedule due to difficulties with manufacturing and shipping schedules. Except for the late delivery of this equipment, which was eventually arranged with the assistance of the Engineering Education Project (Cr.2044-NEP), the Pokhara component was successfully completed by the revised final closing date.

10. National Skill Testing Authority and Public Service Promotional Structure. A skill testing authority was established provisionally in 1985. When the Council for Technical Education and Vocational Training (CTEVT) was officially established in November 1988, it absorbed these activities creating the National Skill Testing Board (NSTB) with employer and trade union participation. The Board assumed responsibility for preparing national skill standards and applying skill tests throughout Nepal, and created a Skill Testing Division (STD) to be its executive arm. Trade advisory committees have been established. Fifty-two trade standards have been developed and annual trade tests have been conducted since 1985. Trade testing and certification were started in 1987. Seventy part-time testing officers were trained to apply the tests at various locations including the Western Region Campus, and a technical library was established for the STD.

11. Under the DCA, the Government agreed to implement by January 1 1985 a plan to improve the appointment and career development opportunities of skilled craftsmen and technicians in the public service. It was recognized during supervision in September 1984 that this responsibility rested with specialized ministries, and that the official recognition of skill tests would have to be taken up in the context of restructuring of the civil service, which was not expected in the near future. However, in 1986 the Government appointed a task-force and working group to study alternative approaches. In June, 1989, a report on Career Progress Opportunities for Technicians and Tradesmen was presented to the Ministry of General Administration, but by the project closing date, its proposals had not been adopted.

12. Educational Studies. It was foreseen at appraisal, that the Credit would assist preparation of a proposed primary education project, and of possible projects in secondary and in adult and non-formal education. Preparation of the Primary Education Project (Cr. 1463-NEP), which was approved in 1984, was financed by an IDA technical assistance credit. It was carried out by the Institute of Education and the UNESCO cooperative program. There is no indication that the resources available for education studies through the Cr. 1198-NEP were utilized in its preparation. No feasibility studies were carried out on secondary education and non-formal and adult education, and no projects were developed, because there was insufficient expectation of developing adequate local capacity to implement them.

13. Technical Assistance. The technical assistance financed by UNDP made a major contribution to staff and curriculum development for the Pokhara center and provided valuable support to the NSTA and Career Development activities. After initial delays, a full team of ILO consultants was assembled. The agreed program of overseas study tours and fellowship training was executed in a timely manner.

14. Disbursements. By the final revised closing date, SDR 9.9 million (79.5%) out of the credit total of SDR 12.5 million had been disbursed. This corresponded to a historical US dollar equivalent of $12.2 million, (84.9% of the appraisal estimate of $US 14.3 million). At the time of preparation of this report, the Borrower had been requested to advise as to the likely timing and amount of a final Replenishment Application for the Special Account. Since no suitable reply was received, the full amount of the pending Application 139 (converted as $220,008) was utilized for recovery purposes, leaving a balance refundable to IDA of $16,588. The Project Coordinator was advised by IDA to utilize funds remaining in the Special Account, to pay for claims made in Application 139.

F. Project results.

15. The Center is fully staffed and equipped, and classes are being conducted on schedule. Since August 1987, when the first technician students were admitted, 146 technicians have finished 3-year training at the new campus. A further 177 technicians were under training in April 1992 (table 3 below). Current annual enrollment capacity corresponds to appraisal estimates. The first batch of 43 technicians graduated in May 1991. It was estimated by the PIU that about half of them found employment in the public sector, and about 20% in the private sector, with many opting for further studies. The second batch is encountering more difficulty in finding stable employment in appropriate areas of specialization, and a tracer study will shortly be undertaken to determine whether the intake in any of the three technician

training programs should be adjusted to reflect changes in the labor market.

16. Two hundred and forty five trainees have so far graduated in two batches from the one-year craft training program. Approximately 75% of the first batch were estimated to have found employment. Another 18% set up their own businesses, and the remaining 7% went on to further studies. A third batch of 99 one-year craft-level trainees was admitted in 1991.

17. The trade testing and career development activities established under the project, and now the responsibility of the CTEVT, are managed and supported by a vocational training project assisted by the Asian Development Bank. The STD continues to conduct regular trade tests and to issue trade certificates.

18. The impact of the Project has extended beyond its immediate outputs. It has contributed to overcoming chronic labor market shortages of skilled technical personnel, and has provided training opportunities in hitherto neglected parts of the country. Its impact on human resource development at the tertiary technical level in western Nepal has been significant. It has encouraged qualitative standards of technical preparation, and can serve as a model for enhancing the physical and social environment in similar areas of Nepal and elsewhere. About 25 of the first batch of craft trainees have set up their own small businesses, demonstrating the project's potential for stimulating local opportunities of employment creation.

19. The Project aimed to initiate structural changes in civil service procedures for appointment and career progression. Training standards have now been aligned to the recognized levels of entry to public service appointments. However, there are still limitations on career progression for technical appointees. This issue was under review by the National Education Commission, which was due to report in 1992. It was widely expected that the Commission would recommend changing the current regulations in order to enhance promotional opportunities.

G. Project sustainability.

20. Sustainability will depend upon the extent of commitment to the concept and objectives of the Project. This in turn will depend on its perceived relevance to meeting skilled manpower needs and creating jobs, and on the adaptability of new facilities and procedures. Arrangements in place at the IOE will help to ensure continued availability of adequate numbers of trained staff. The quality and value of training programs will depend on the resources available for consumable training materials and maintenance. IDA assistance to further project activity in the IOE helps to maintain established relations, and to keep sustainability under review. This cooperation is already

facilitating finalization of equipment procurement and supplemental civil works. Also, in May 1992, the IOE convened a Workshop on Sustainability under the auspices of the current Engineering Education Project (Cr.2044-NEP), with participation of other government and international agencies, including IDA. The Workshop identified key issues facing the IOE, related to its educational objectives, autonomy, management, and linkages to public and private sector institutions and enterprises. A task force was established to review proposals for operational improvements. Its members include representatives of public and private sector organizations in addition to University staff and IOE faculty.

21. Following the closing of the IDA Credit, incomes of teaching staff declined sharply due to the cessation of extra allowances and other benefits. This has serious implications for staff morale and could lead to the departure of key staff. However, contracts for local training services in Pokhara are helping to provide continuing incentives and to improve facilities. The British Army has concluded a contract with IOE for the retraining for local employment of Gorkha soldiers discharged from British military service. This is a valuable contribution to sustainability, and further opportunities are being explored for staff of the Center to provide training and consultant services.

22. The trade testing system is now well established. Curricula need to be reviewed to take account of changing technologies and labor market requirements and opportunities. Changes in appointment and career progression for technicians and skilled workers in the civil service were foreseen under the project, and are under active review by the Government. When introduced, these will contribute to the national growth and improvement of technical training programs.

H. IDA performance.

23. The Project was systematically identified, prepared and appraised. A total of 61.9 staff weeks were utilized before and during appraisal. During implementation, 23 missions reviewed the Project, with 67.3 staff weeks spent on 17 supervision missions.

24. Construction problems and consequent delays at Pokhara were a major concern during implementation. This led IDA management to seriously consider suspending credit disbursements in 1985. During supervision, therefore, civil works and procurement issues called for more attention than the wider issues of policy implementation under other components. The reports reflect this emphasis. IDA maintained close liaison with the Project from its inception, and the technical support of IDA staff contributed to the Project's successful outcome.

I Borrower performance.

25. Creation of the training center at Pokhara was initially subject to delays. Major problems arose regarding timely performance by the architectural consultants and the main civil works contractor. These were resolved and the work was successfully concluded. Training activities began in 1987 and are proceeding well. It proved difficult to honor, in a timely manner, the policy commitments to establish a skill testing authority and to change public service recruitment and promotion procedures. Nevertheless, by the time of project completion, most of these obligations were met or have subsequently been met.

J. Project relationships.

26. Relationships between IDA and the IOE were businesslike, and further cooperation is under way on another project. IDA operational contact was needed with other parts of the Government to expedite implementation. Some inter-departmental issues arose, but successful relations were established and maintained. UNDP cofinancing of technical assistance raised some procedural questions over the release of funds. These were successfully resolved, but caused initial delays in the delivery of technical assistance.

K Consulting services.

27. Technical assistance services were co-financed by UNDP and provided by the ILO. After initial delays, a suitable team of consultants was assembled and curricula were drafted. A curriculum workshop was held in December 1986 attended by about 90 participants from industry and educational institutions. The workshop successfully accomplished its purpose to validate the work of the consultants. The analysis of job requirements, and their translation into training objectives and lesson plans was systematically executed. Detailed curricula for craft courses were available by late 1987. The consultants also assisted in revising the three-year certificate curriculum introduced at all IOE campuses in 1986.

L. Project documentation and data.

28. The project is well documented. The Staff Appraisal Report gives appropriate information to identify key implementation indicators. These were satisfactorily developed during the third year of implementation and maintained over several missions. However, assessment at project completion would be greatly facilitated if data were available in this form from the date of project effectiveness. Information on disbursements and compliance with covenants is readily available for each phase of the project. The findings of supervision missions were adequately recorded in reports, aides memoire, and exchanges of letters.

# NEPAL

## SECOND EDUCATION PROJECT (Technical and Vocational Training)

## (Credit 1198-NEP)

## PROJECT COMPLETION REPORT

## PART II : PROJECT REVIEW FROM BORROWER PERSPECTIVE

### Overview

1. The credit agreement was signed on April 7, 1982 and the project became effective on July 23, 1982. It was expected to be implemented over a period of about six and a half years, including a two year operation period after completion of the physical facilities. Due to late establishment of the project implementation unit, most of the project activities started late. In addition, the main building contractors did not perform construction work on time. Furthermore, some new residential buildings were added and new additional equipment procured. These necessitated the extension of the closing date originally planned for December 31, 1987 to December 31, 1991. The technical assistance program was provided by UNDP and ILO was designated as the executing agency of the UNDP.

### Project Administration and Management

2. A Project Implementation Unit (PIU) was established in July 1982, chiefly comprising: (i) a project director who was the Dean of the Institute of Engineering; (ii) a Project Coordinator; (iii) a Project Architect; (iv) a Project Engineer. All totalled, the PIU consisted of 27 managerial and supporting staff. The PIU was also supposed to be assisted by the Chief Technical Advisor provided by ILO.

3. The Project experienced major difficulties during implementation. Throughout the implementation period, there were five Project Directors, five Project Coordinators, three Education Officers, three deputy Project Coordinators, three Project Architects, two Project Engineers and three Chief Technical Advisors, and such turnover also contributed to lack of coherence during implementation. The last CTA was replaced by a skill test consultant who was more attached to the Skill Testing Authority than to the Western Region Campus (WRC) Project.

Professional Services and Building Design

4. A firm of consulting architects, engineers and planners was selected and contracted by the Project Coordinator with Project Board and IDA approval. Its task was to carry out the design of the buildings and furniture for WRC together with preparation of specifications and site supervision. The performance of the consulting firm was satisfactory in the design phase. A little site supervision during the construction phase was done.

Civil Works

5. The selection of the building contractors for the construction of WRC followed IDA procedures. The size of the bidding attracted even foreign contractors. Due to high bidding the first time it was retendered and a selection of tenderers was done by the PIU among the bidders after the PIU board and IDA has accepted International Competitive Bidding Procedures. The tender was awarded to an Indian main construction contractor.

6. Civil works experienced considerable delays at the start of the Project implementation due mainly to (a) late establishment of PIU, (b) poor performance in construction works by main contractors, and (c) difficulty in taking quick decisions by the PIU board regarding construction works.

7. Poor performance in construction works caused problems which included: leakages, drainage, plumbing and electrification thereby delaying the completion of the construction works and such delays caused some damage to the equipment which could not be installed as planned when delivered in the site.

Equipment and Furniture

8. Among the conditions of effectiveness, the Development Credit Agreement specified that: "the Borrower shall have entered into agreements with technical agencies or bodies for the provision of technical assistance experts and fellowships for the project ..." Such an agreement was signed on July 5, 1982 with UNDP and ILO as executing agency. It covered UNDP/ILO provision of services for equipment procurement as well as technical assistance. An ILO expert participated actively in the preparation of an equipment list and specifications in close collaboration with the PIU and the purchase and operation of equipment was carried out in two phases. During the second phase, additional equipment was purchased because of a change in curriculum. All parts were procured through normal international competitive bidding in accordance with IDA regulations. ILO experts assisted the PIU in finalizing the bids in the first phase and PIU did the second phase.

9. Tenders were advertised internationally and organized into packages by trade. PIU faced many problems during the procurement of the second phase of equipment. They are Indo-Nepal Trade & Transit Treaty, Gulf-war, popular movement in the country, unavailability of budget in time and late acceptance of time extension of the project by HMG. Although ILO experts had already left the country by the time the installation phase could proceed, this work was satisfactorily carried out by the PIU and Campus faculty. The IDA project completion mission was shown the equipment in the Western Region Campus. All the equipment is now installed and operational.

10. Most of the furniture for Western Region Campus was office furniture including: armchairs, visitors' chairs, tables, office desks, tea tables and hostel and residential beds. The furniture was locally designed and procured through local competitive biddings. Most of the furniture was delivered on time.

Technical Assistance

11. The project experienced serious difficulties with regard to the key post of the Chief Technical Advisor (CTA) and subject specialists. During the project implementation, there were three CTAs. The replacement of the CTAs took longer than expected due to HMG & UNDP rules and regulations. The last CTA was simply a trade specialist. Similarly, subject specialists were also recruited late. However, once finally recruited, they performed satisfactorily. Although most of the activities were fulfilled at the last stage, more could have been done in this project by UNDP assistance.

Instructional and Consumable Materials

12. The curriculum prepared in cooperation with PIU is now followed in WRC. However, trainees still lack necessary instructional materials such as books, manuals, and worksheets in Nepali. Such materials were to be developed by the technical assistance experts, but due to inadequate management, these were never accomplished fully. In addition, the outcome of new curriculums was never tested. WRC has adequate consumable materials for workshop practice for four years.

Lessons Learned

13. The PIU was never given the status as mentioned in the DCA and UNDP agreement thereby causing considerable delays in carrying out critical activities. Even small matters needed to be referred back. Had HMG and UNDP helped this project at a later stage, the project could have gained a lot and would have been an example.

IDA Performance

14. In view of the fact that it was the second project of this nature to be implemented by IOE through an experienced PIU, the monitoring carried out by IDA during the first phase of the implementation to assist the PIU was efficient. The appraisal mission overestimated the Government's and IOE's ability to recruit permanent staff and establish the WRC structure. Perhaps closer attention should have been paid at appraisal to the appropriateness of some components which were not given priority by the IOE, such as level of Campus Chief and heads of departments.

15. During the construction period, some misunderstanding occurred. PIU did not agree to have a construction manager as proposed by IDA missions, resulting in late completion of the construction work and its poor quality.

16. IDA showed flexibility in agreeing to most of the proposals sent by PIU at the last stage, in order to establish the WRC and retain most of the experienced and trained staffs of WRC. In addition, IDA has shown greater generosity towards this project in solving many activities and without this the project would have been incomplete.

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PART III: TABLES AND STATISTICAL INFORMATION

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Table 1: RELATED IDA CREDITS

| Loan/Credit Title | Purpose | Year of Approval | Status | Comment |
|---|---|---|---|---|
| Education I<br>Cr. 772-NEP | Technician Training | 1978 | Completed June 1986 | Construction delays, but on the whole successful |
| Education III<br>Cr. 1463-NEP | Primary Education | 1984 | Closed, June 1992 | |
| Cr. 1534-NEP | Agricultural Manpower | 1985 | Due to close, June 1993 | |
| Cr. 2044-NEP | Engineering Education | 1989 | Completion 1997 | Delays in Construction and Instit. Development |
| Cr. 2048-NEP | Earthquake Schools Rehabilitation | 1989 | Completion 1993 | |
| Cr. 2257-NEP | Basic & Primary Education | 1992 | Completion 1997 | |

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Table 2: PROJECT TIMETABLE

| | Planned date | Revised date | Actual date |
|---|---|---|---|
| Identification | 10/79 | - | 10/79 |
| Preparation | 03/80 | - | 04/80 |
| Pre-appraisal | 06/80 | 11/80 | - |
| Appraisal | 12/80 | - | 11/80 |
| Credit negotiations | 04/81 | 05/81 | 10/81 |
| Post negotiations mission | 11/81 | - | 11/81 |
| Board approval | 05/81 | - | 12/22/81 |
| Credit signature | - | - | 04/07/82 |
| Credit effectiveness | 10/81 | - | 07/23/82 |
| Project completion | 12/31/87 | 12/31/88<br>12/31/89<br>12/31/90 | 06/30/91 |
| Credit closing | 06/30/88 | 06/30/89<br>06/30/90<br>06/30/91 | 12/31/91 |

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## Table 3: ADMISSION AND OUTPUT OF STUDENTS POKHARA CAMPUS, 1987-1991

### I: 3 year Engineering Technicians Program

| | 1987 | 1988 | 1990[1]/ | 1991 |
|---|---|---|---|---|
| Admitted: | | | | |
| - CIVIL | 32 | 69 | 64 | 64 |
| - ELECTRICAL | 16 | 18 | 16 | 16 |
| - MECHANICAL | 16 | 18 | 16 | 16 |
| | 64 | 105 | 96 | 96 |
| Completed Training [2]/ | | | | |
| - CIVIL | 25 | 62 | 54 | 62 |
| - ELECTRICAL | 15 | 15 | 15 | 16 |
| - MECHANICAL | 13 | 16 | 15 | 15 |
| | 53 | 93 | 84 | 93 |
| Obtained Diploma | | | | |
| - CIVIL | 20 | | | |
| - ELECTRICAL | 11 | | | |
| - MECHANICAL | 12 | | | |
| | 43 | | | |

### II: One-year Craft Training Program

| | 1988 | 1989 | 1991 |
|---|---|---|---|
| Admitted | 188 | 115 | 99 |
| Passed[3]/ | 140 | 105 | - |

[1] Admission schedule for late 1989 slipped to January 1990.

[2] 1990 and 1991 figures indicate completion of 2nd and 1st year respectively. April 1992 examination results for classes of 1988, 1990 and 1991 are currently awaited.

[3] 1991 courses still in progress.

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Table 4: ESTIMATED AND ACTUAL DISBURSEMENT OF CREDIT PROCEEDS

| | | | Cumulative Disbursements | | | |
|---|---|---|---|---|---|---|
| IDA/FY | Semester | | Estimated(APR) ($ US million) | Actual (SDRm) | ($USm)[1] | as % of estimate |
| 1982 | 1 | 07/81 - 12/81 | 0.00 | 0.00 | 0.00 | 0.0 |
| | 2 | 01/82 - 06/82 | 0.06 | 0.00 | 0.00 | 0.0 |
| 1983 | 1 | 07/82 - 12/82 | 0.24 | 0.00 | 0.00 | 0.0 |
| | 2 | 01/83 - 06/83 | 0.99 | 0.08 | 0.09 | 0.1 |
| 1984 | 1 | 07/83 - 12/83 | 2.81 | 0.37 | 0.38 | 13.5 |
| | 2 | 01/84 - 06/84 | 5.12 | 0.89 | 0.93 | 18.2 |
| 1985 | 1 | 07/84 - 12/84 | 7.45 | 1.10 | 1.14 | 15.3 |
| | 2 | 01/85 - 06/85 | 9.79 | 1.49 | 1.53 | 15.6 |
| 1986 | 1 | 07/85 - 12/85 | 12.12 | 1.93 | 1.98 | 16.3 |
| | 2 | 01/86 - 06/86 | 13.67 | 2.15 | 2.23 | 16.3 |
| 1987 | 1 | 07/86 - 12/86 | 13.83 | 5.19 | 5.88 | 42.6 |
| | 2 | 01/87 - 06/87 | 13.95 | 6.13 | 7.08 | 50.7 |
| 1988 | 1 | 07/87 - 12/87 | 14.12 | 7.24 | 8.49 | 60.1 |
| | 2 | 01/88 - 06/88 | 14.30 | 7.35 | 8.64 | 60.4 |
| 1989 | 1 | 07/88 - 12/88 | | 7.59 | 8.95 | 62.5 |
| | 2 | 01/89 - 06/89 | | 7.77 | 9.20 | 64.3 |
| 1990 | 1 | 07/89 - 12/89 | | 8.14 | 9.67 | 67.6 |
| | 2 | 01/90 - 06/90 | | 8.14 | 9.67 | 67.6 |
| 1991 | 1 | 07/90 - 12/90 | | 8.66 | 10.41 | 72.7 |
| | 2 | 01/91 - 06/91 | | 8.93 | 10.78 | 75.4 |
| 1992 | 1 | 07/91 - 12/91 | | 9.62 | 11.71 | 81.9 |
| | 2 | 01/92 - 06/92 | | 9.93 | 12.14 | 84.9 |

[1] historical US $ equivalent

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Table 5: ESTIMATED AND ACTUAL PROJECT COSTS BY CATEGORY OF EXPENDITURE
($ US Million)

| | Appraisal Estimate | | | | Actual | | | |
|---|---|---|---|---|---|---|---|---|
| | Loc. | For. | Tot. | % | Loc. | For. | Tot. | % |
| Site development | 0.91 | 0.39 | 1.30 | 12.5 | 0.16 | 0.00 | 0.16 | 1.0 |
| Buildings | 1.95 | 1.30 | 3.25 | 31.2 | 2.58 | 2.93 | 5.51 | 33.8 |
| Professional services | 0.37 | 0.04 | 0.41 | 3.9 | 0.21 | 0.00 | 0.21 | 1.3 |
| Furniture | 0.21 | 0.21 | 0.41 | 4.0 | 0.41 | 0.00 | 0.41 | 2.5 |
| Equipment | 0.43 | 2.42 | 2.85 | 27.4 | 0.19 | 4.23 | 4.42 | 27.0 |
| Staff salaries | 0.99 | 0.00 | 0.99 | 9.5 | 2.01 | 0.00 | 2.01 | 12.3 |
| Consumable training materials | 0.06 | 0.13 | 0.19 | 1.8 | 0.29 | 0.07 | 0.36 | 2.2 |
| Experts/ consultants[1] | 0.06 | 0.34 | 0.40 | 3.9 | 0.01 | 3.23 | 3.24 | 19.9 |
| Project studies | 0.45 | 0.15 | 0.60 | 5.8 | 0.00 | 0.00 | 0.00 | |
| **Total baseline costs** | 5.42 | 4.98 | 10.40 | 100 | 5.86 | 10.46 | 16.32 | 100 |

[1] actual project cost of experts and consultants includes whole cost of UNDP/ILO technical assistance project

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Table 6: ESTIMATED AND ACTUAL ALLOCATION OF CREDIT PROCEEDS
($ US Thousand)

| Category | Original allocation | Actual Disbursements |
|---|---|---|
| 1. Civil works and furniture, including building materials | 6,910 | 5,384 |
| 2. Equipment, books, journals and instructional materials | 3,752 | 4,695 |
| 3. Professional services (for construction, furnishing & equipment) | 480 | 194 |
| 4. Other consultants' services | 1,167 | 46 |
| 5. Staff salaries, allowances & other operating costs | 1,041 | 1,507 |
| 6. Consumable training materials | 275 | 299 |
| 7. Unallocated | 675 | 0 |
| Refundable balance[1] | | 16 |
| TOTAL | 14,300 | 12,141 |

[1] At the time of preparation of this Report, a request had been made to the Project by the Asia Disbursements Division, as to the likely timing and amount of a final replenishment application for the Special Account. Since no suitable reply was received, the full amount of the pending Application 139 (converted as $220,008) was utilized for recovery purposes, leaving a balance refundable to IDA of $16,588. Pending the expected refund to IDA, this amount therefore appears in the total of funds disbursed. (The Project Coordinator was advised by LOAAS to utilize funds remaining in the Special Account to pay for the amounts claimed in the above Application).

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Table 7: Estimated and Actual Project Financing
($ US million)

| | Appraisal Estimate | | | | Actual | | | |
|---|---|---|---|---|---|---|---|---|
| | HMGN | IDA | UNDP | Total | HMGN | IDA | UNDP | Total |
| Civil works & furniture | 0.05 | 6.90 | 0.00 | 6.95 | 0.30 | 5.38 | 0.00 | 5.68 |
| Land acquisition | 0.25 | 0.00 | 0.00 | 0.25 | 0.16 | 0.00 | 0.00 | 0.16 |
| Equipt.,books, journals, instr. matls. | 0.01 | 3.75 | 0.00 | 3.76 | 0.02 | 4.69 | 0.00 | 4.71 |
| Prof. svcs., engng/arch. fees | 0.00 | 0.48 | 0.00 | 0.48 | 0.00 | 0.19 | 0.00 | 0.19 |
| Consultant svcs & studies | 0.00 | 1.17 | 0.00 | 1.17 | 0.00 | 0.05 | 0.00 | 0.05 |
| Consultant svcs, fellow-ships & misc. | 0.00 | 0.00 | 2.50 | 2.50 | 0.00 | 0.00 | 3.23 | 3.23 |
| Staff sals., allces & oper-ating costs | 0.26 | 1.04 | 0.00 | 1.30 | 0.43 | 1.51 | 0.00 | 1.94 |
| Consumable trg. materials | 0.03 | 0.28 | 0.00 | 0.31 | 0.06 | 0.30 | 0.00 | 0.36 |
| Unallocated | 0.10 | 0.68 | 0.00 | 0.78 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total project cost** | 0.70 | 14.30 | 2.50 | 17.50 | 0.97 | 12.12 | 3.23 | 16.32 |
| Less taxes & duties | -0.66 | 0.00 | | -0.66 | | | | |
| **Total net project cost** | 0.04 | 14.30 | 2.50 | 16.84 | 0.97 | 12.12 | 3.23 | 16.32 |

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Table 8 : COMPLIANCE WITH CREDIT CONVENANTS

| AGMT. SEC. | STATUS 1/ | ORIGINAL DATE | REVISED DATE | TYPE 2/ | DESCRIPTION OF COVENANT | COMMENTS |
|---|---|---|---|---|---|---|
| Cred 3.01b(2) | OK | - | - | - | Take necessary steps to ensure electric power supply to site. | Electric power supply to the site is available. |
| 3.02a(2) | OK | - | - | - | Employ educational consultants for Parts A(2), B and C of the Project. | Part A2:TA assistance has been completed. Part B: skill testing expert is advising the skill authority. Part C: Curriculum specialists have completed their work. |
| 3.07a | OK | 6 mos. after opening | - | - | Establish a Pokhara Center Advisory Committee | Established as a rule according to University regulations. |
| 3.07b | OK | 6 mos. after opening | - | - | Use Skills Aptitude tests in the selection of trainees. | Skill aptitude is part of the entrance test. |
| 3.08a | OK | 01/01/83 | - | - | Establish a Secretariat for the NSAT. | Chief of the Secretariat was appointed on a full time basis in October 1984. Three specialists were appointed in September 1985. The Secretariat has moved to its own offices and is |

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| AGMT. SEC. | STATUS 1/ | ORIGINAL DATE | REVISED DATE | TYPE 2/ | DESCRIPTION OF COVENANT | COMMENTS |
|---|---|---|---|---|---|---|
| | | | | | | now fully staffed and fully operational. |
| 3.08b | OK | 01/01/84 | 01/01/86 | | Cause said Secretariat to establish skill standards and develop skill tests in consultation with the Association | Trade Advisory Committee are established. 52 trade standards developed and annual trade tests are being conducted since 1985. |
| 3.08c | OK | 01/01/85 | 01/01/87 | | Establish a National Skill Testing Authority. (NSTA) | Authority has Statutory status. The act to grant it autonomy was signed in 1988. |
| 3.09a | SOON | 01/01/85 | - | | Recognize skill tests for purposes of appointment and career development in the public service. | Prepared a report to improve career development of craftsmen and technicians in the public service. The Ministry of General Administration is preparing proposals to implement better career provisions. |
| 3.09b | OK | 01/01/84 | 01/01/86 | | Develop and furnish to the Association for review a plan to improve career opportunities for skilled craftsmen and technicians in the public service. | Ministry of General Administration has prepared a proposal which needs to be considered by the new Government. |
| 3.09c | SOON | 01/01/85 | 01/01/87 | | Implement said plans. | To be expected in 1992. |

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| \GMT. SEC. | STATUS 1/ | ORIGINAL DATE | REVISED DATE | TYPE 2/ | DESCRIPTION OF COVENANT | COMMENTS |
|---|---|---|---|---|---|---|
| 3.10a | OK | - | - | - | Designate IOE to be responsible for monitoring following functions, academic progress at Pokhara and Pulchowk campus and employment for graduates. | PIU of the First Education project monitors academic progress at Pulchowk. The monitoring system has been transferred to Pokhara. |
| 3.10b | OK1 | 01/01/84 | - | - | Furnish to the Association for review and comment a detailed system for monitoring and evaluation of the projects financed under the credit and the prior, and provide the Association results of such annual evaluation of such credits for five years following the first output of graduates. | Monitoring and evaluation system in Operation. |
| 3.11a | OK1 | 04/30/82 | - | - | Provide staffing and staff training plan for the Pokhara Center. | Completed |
| 3.11B | OK | 08/01/82 | - | - | Provide a staffing and staff training plan for the Secretariat of the NSTA. | Plan has been prepared and is being implemented. |
| 3.12a | OK | 6 mos. before opening | | - | Establish and maintain a repair workshop with qualified and trained personnel. | In compliance. |
| 3.12b | OK | - | - | - | Ensure funds are available annually for maintenance and repair. | In compliance |

1/ OK - Covenant complied with.

OK1 - Covenant complied with now but was revised in past.

SOON - Compliance expected in a reasonably short time.

NYD - Not yet due.

DLET - Proposed for deletion as no longer relevant.

REVS - Needs revision in agreement with Borrower to reflect changed circumstances.

ACT - Needs use of formal remedies to bring about compliance.

UNK - Status of Covenant unknown.

2/ Indicates type of covenant.

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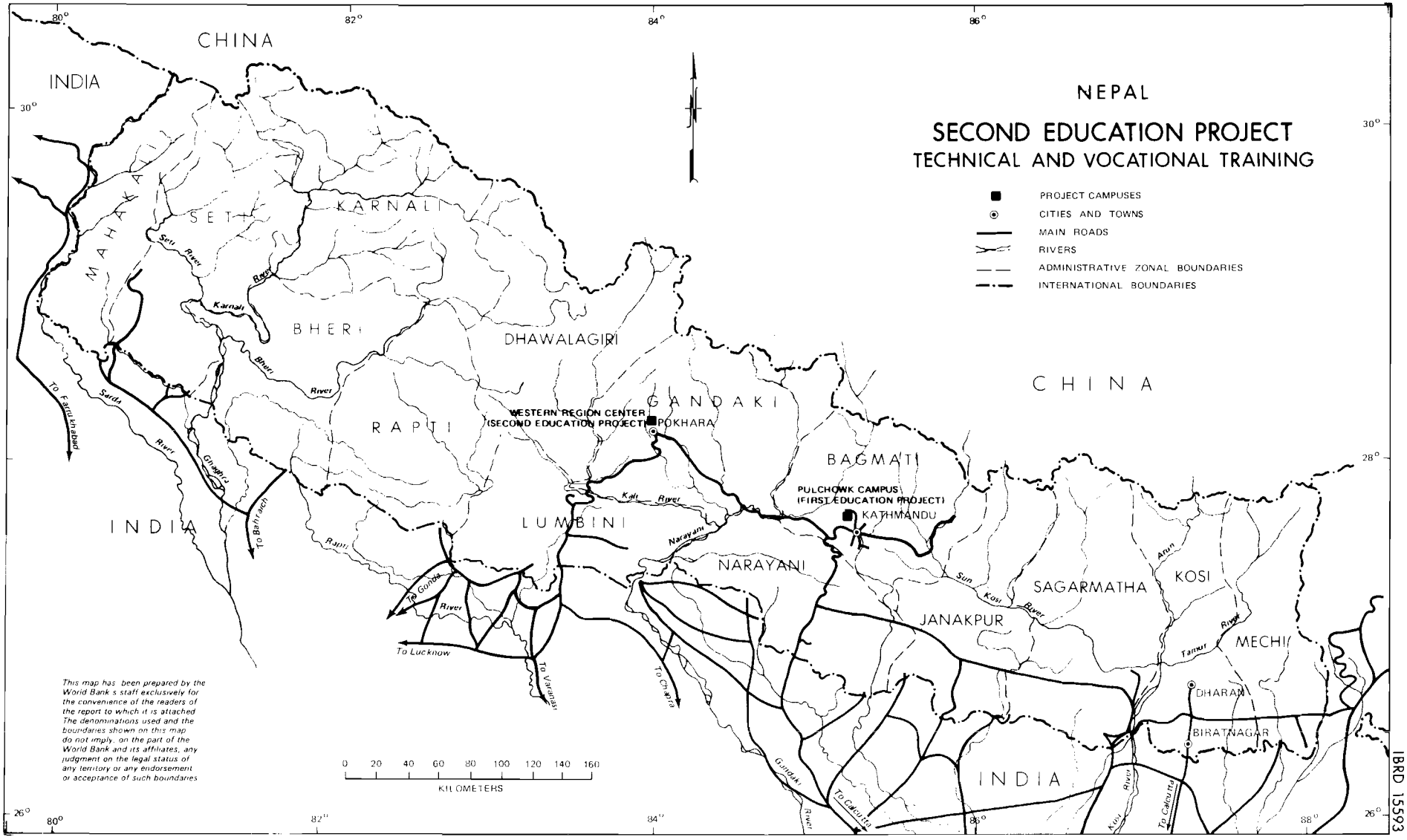
Table 9: Staff Inputs by Stage of Project Cycle (in Staff Weeks)

| Stage of Project Cycle | | Planned | Actual | | | | |
|---|---|---|---|---|---|---|---|
| | | | Architect | Economist | Educator | Other | Total |
| 1 | Pre-appraisal | n.a[1] | 1.1 | 0.9 | 22.1 | 5.1 | 29.2 |
| 2 | Appraisal | n.a | 12.9 | 5.1 | 14.7 | 0.0 | 32.7 |
| 3 | Negotiation | n.a | 6.6 | 0.0 | 4.5 | 0.0 | 11.1 |
| 4 | Supervision | n.a | 12.9 | 0.1 | 51.1 | 3.2 | 67.3 |
| 5 | Completion | n.a | 0.0 | 0.0 | 9.5 | 0.0 | 9.5 |
| | Total | | 33.50 | 6.10 | 101.9 | 8.30 | 149.8 |

[1] not available

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